

CLAIM AMENDMENTS

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Previously Presented) A method for applying a hybrid coating to a substrate, which coating comprises

an inorganic and an organic component and which inorganic component comprises nanoparticles, wherein precursors for said organic and inorganic component are activated in two or more separate plasma sources for plasma activated deposition of a chemical vapor phase, wherein said activated precursors are combined before they are deposited on the substrate from the chemical vapor phase for forming the coating, and wherein the inorganic component is generated in a high electron density high-frequency plasma and wherein the high electron density high-frequency plasma is pulsed.
2. (Cancelled)
3. (Previously Presented) A method according to claim 1, wherein one of the two activated precursors passes the plasma for activation of the other precursor, whereafter said activated precursors are combined.
4. (Original) A method according to claim 3, wherein the activated inorganic precursor passes the plasma for activation of the organic precursor.
5. (Original) A method according to claim 3, wherein the activated organic precursor passes the plasma for activation of the inorganic precursor.
- 6-7. (Cancelled).
8. (Previously Presented) A method according to claim 1, wherein the organic component is generated in a low electron density high-frequency plasma.

9. (Original) A method according to claim 8, wherein the low electron density high-frequency plasma is pulsed.

10. (Previously Presented) A method according to claim 1, wherein the precursor for the inorganic component comprises metal-carbon, metal-hydrogen, metal-nitrogen, metal-halide, and/or metal-oxygen bonds.

11. (Withdrawn) A method according to claim 9, wherein the precursor for the inorganic component comprises an organometal compound, a metal organic compound, metal alkoxyde, metal carboxylate, or metal-.beta.-diketonate.

12. (Previously Presented) A method according to claim 10, wherein the metal comprises aluminum, titanium, zirconium, molybdenum, cesium, tin and/or platinum.

13. (Withdrawn) A method according to claim 1, wherein the precursor for the inorganic component comprises silicon-carbon, silicon-hydrogen, silicon-nitrogen, silicon-halide, and/or silicon-oxygen bonds.

14. (Withdrawn) A method according to claim 13, wherein the precursor for the inorganic component comprises an organosilicon compound, silicon alkoxyde, siloxane, silane, silazane, silicon carboxylate, or silicon-.beta.-diketonate.

15. (Withdrawn) A method according to claim 1, wherein the precursor for the organic component comprises alkanes, alkynes, alkenes, arenes, and optionally wholly or partly (cyclo)alkyl-, aryl-, aralkyl-, allyl-, methoxy-, halogen-, hydroxy-, amino-, nitro-, or cyano-substituted derivatives thereof.

16. (Withdrawn) A method according to claim 1, wherein the precursor for the organic component comprises short chain alkanes, acrylate, styrene or carbon-fluorine compounds.

17. (Previously Presented) A method according to claim 1, wherein the precursor for the organic component comprises an organosilicon compound, organometal compound, metal organic compound or p-xylylene, and/or optionally functionalized compounds derived therefrom.

18. (Previously Presented) A method according to claim 1, wherein the separate activation sources are situated in a reactor in which a pressure of between 0.01 and 1000 mbar prevails.

19. (Previously Presented) A method according to claim 1, wherein the separate activation sources are situated in a reactor in which a pressure of 0.1 to 50 mbar prevails.

20. (Previously Presented) A method according to claim 1, wherein the plasmas are formed by bringing a mixture of precursor material, argon gas and optionally oxygen to electrical discharge.

21. (Previously Presented) A method according to claim 1, wherein to the low electron density plasma, also vapor coming from the high electron density plasma is supplied.

22. (Previously Presented) A method according to claim 1, wherein to the high electron density plasma, also vapor coming from the low electron density plasma is supplied.

23. (Withdrawn) A hybrid coating, obtainable by a method according to claim 1.

24. (Withdrawn) A product comprising a hybrid coating according to claim 23.

25. (Withdrawn) A device for applying a hybrid coating of an inorganic and an organic component to a substrate through plasma activated deposition of a chemical vapor phase, which comprises a reactor space provided with a carrier for a substrate, and at least two separate plasma sources for forming the inorganic and the organic component, wherein the separate plasma sources are situated in the processing direction, such that the two activated precursors are combined before being deposited on the substrate.

26. (Withdrawn) A device according to claim 25, wherein the separate plasma sources are situated in the processing direction, such that one of the two activated precursors passes the plasma for activation of the other precursor before being deposited on the substrate.

27. (Withdrawn) A device according to claim 25, wherein one of the plasma sources is situated in the reactor space.

28. (Withdrawn) A device according to claim 25, wherein one of the plasma sources forms a direct plasma.

29. (Withdrawn) A device according to claim 25, wherein one of the plasma sources is a plasma source for generating a high electron density high-frequency plasma and another plasma source is a plasma source for generating a low electron density high-frequency plasma.

30. (Withdrawn) A device according to claim 29, wherein the plasma sources are pulsating.

31. (Withdrawn) A device according to claim 26, which further comprises transport means for a vapor phase.

32. (Withdrawn) A hybrid coating, obtainable by a method according to claim 1.

33. (Withdrawn) A product comprising a hybrid coating according to claim 32.

34. (Previously Presented) The method of claim 1, wherein the high electron density high-frequency plasma is pulsed at a pulse frequency of from about 1 to about 100 Hz.

35. (Previously Presented) The method of claim 1, wherein the pulse frequency is 25 Hz with a duty cycle between about 5% to about 10%.